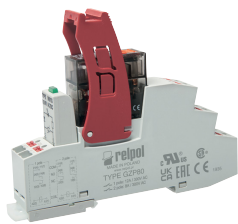
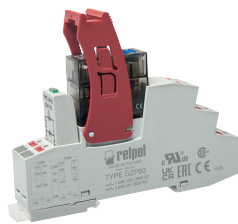


# PI85P with socket Push-in GZP80 interface relays with Push-in terminals

RMP85 (AC) + GZP80



RMP85 (DC) + GZP80



- Interface relay **PI85P with socket GZP80** consists of: electromagnetic relay **RMP85**, grey plug-in socket **GZP80** (flammability class V-0), signalling / protecting module type **M...**, retainer / retractor clip **GZP80-0400** (plastic)
- 35 mm rail mount acc. to EN 60715 or on panel mounting with one M3 screw
- May be linked with interconnection strips type **ZGZP...**
- Recognitions, certifications, directives: recognitions RMP85, RoHS, **CE**

## Contact data

|                                |                                  |                                       |
|--------------------------------|----------------------------------|---------------------------------------|
| Number and type of contacts    |                                  | 1 CO                                  |
| Contact material               |                                  | <b>AgNi</b>                           |
| Rated / max. switching voltage | AC                               | 250 V / 300 V                         |
| Min. switching voltage         |                                  | 12 V 10 mA                            |
| Rated load                     | AC1                              | 16 A / 250 V AC <b>1</b>              |
| Min. switching current         |                                  | 10 mA 12 V                            |
| Max. make current              |                                  | 32 A 20 ms                            |
| Rated current                  |                                  | 16 A                                  |
| Max. breaking capacity         | AC1                              | 4 000 VA                              |
| Min. breaking capacity         |                                  | 0,12 W 10 mA / 12 V                   |
| Contact resistance             |                                  | ≤ 100 mΩ 1 A / 6 V DC                 |
| Max. operating frequency       | • at rated load AC1<br>• no load | 360 cycles/hour<br>18 000 cycles/hour |

## Coil data

|                                   |                |  |
|-----------------------------------|----------------|--|
| Rated voltage                     | 50 Hz AC<br>DC | <b>24, 115, 230 V</b><br>12, <b>24</b> , 48, 110 V |
| Must release voltage              |                | AC: ≥ 0,15 U <sub>n</sub> DC: ≥ 0,1 U <sub>n</sub> |
| Operating range of supply voltage |                | see Tables 1, 2                                    |
| Rated power consumption           | AC<br>DC       | 0,75 VA<br>0,4 ... 0,48 W                          |

## Insulation according to EN 60664-1

|                             |  |  |
|-----------------------------|--|--|
| Insulation rated voltage    |  | 300 V AC   |
| Rated surge voltage         |  | 4 000 V 1,2 / 50 μs  |
| Overvoltage category        |  | III  |
| Insulation pollution degree |  | 3  |
| Dielectric strength         | • between coil and contacts<br>• contact clearance | 5 000 V AC      type of insulation: reinforced<br>1 000 V AC      type of clearance: micro-disconnection |
| Contact - coil distance     | • clearance<br>• creepage                          | ≥ 8 mm<br>≥ 8 mm   |

## General data

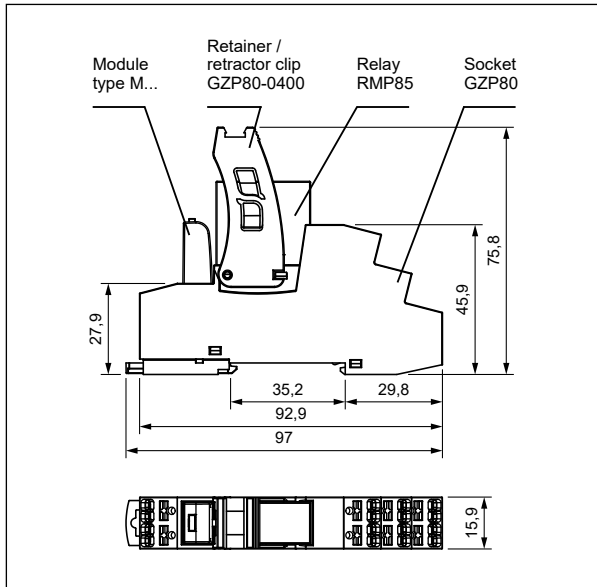
|   |   |   |
|---|---|---|
| Operating / release time (typical values) |   | 15 ms / 8 ms  |
| Electrical life                           | • resistive AC1<br>(number of cycles)                       | > 3 x 10 <sup>4</sup> AC coils, 16 A, 250 V AC, ON for 5 s / OFF for 5 s<br>> 10 <sup>4</sup> DC coils, 16 A, 250 V AC, ON for 5 s / OFF for 5 s<br>> 3 x 10 <sup>4</sup> 16 A, 250 V AC, 70 °C, ON for 1 s / OFF for 9 s |
| Mechanical life (cycles)                  |   | > 10 <sup>6</sup> AC coils<br>> 5 x 10 <sup>6</sup> DC coils  |
| Dimensions (L x W x H)                    |   | 97 x 15,9 x 75,8 mm   |
| Weight                                    |   | 67 g  |
| Ambient temperature                       | • storage<br>(non-condensation and/or icing)<br>• operating | -40...+70 °C<br>-40...+55 °C  |
| Cover protection category                 |   | IP 20      EN 60529   |
| Environmental protection                  |   | RMP85: RTII      GZP80: RT0      EN 61810-1   |
| Shock resistance                          |   | 10 g  |
| Vibration resistance                      | (NO/NC)   | 10 g / 5 g      length direction: 10 g / 2 g      10...150 Hz   |

The data in bold type relate to the standard versions of the relays.

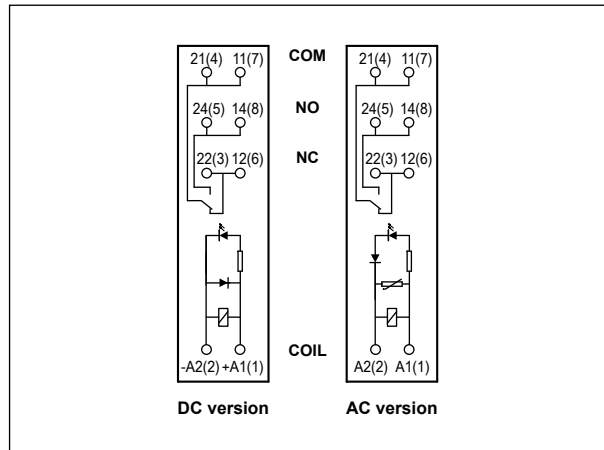
**1** Loads above 12 A require bridging pairs of Push-in terminals: 11 with 21, 12 with 22, 14 with 24 - see page 2.

# PI85P with socket Push-in GZP80 interface relays with Push-in terminals

## Dimensions

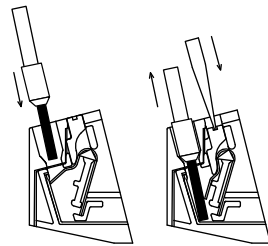


## Connection diagrams (Push-in terminals side view)

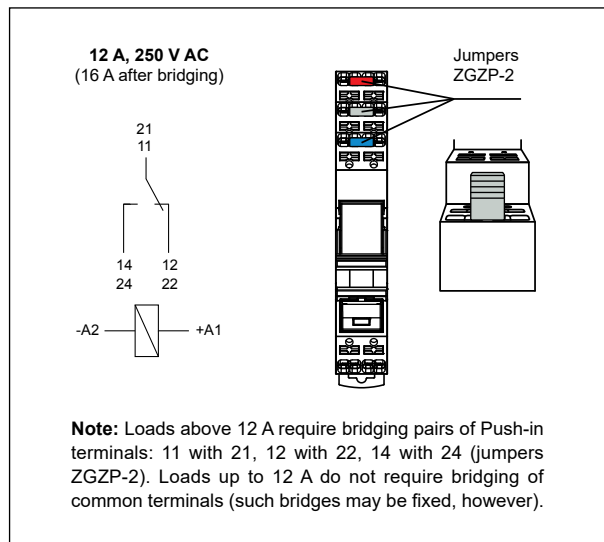


## Wire connection

The drawings present inserting wire into the Push-in terminal and removing wire using the button releasing a clamp (assembly without tools).



## Connection of GZP80 socket



## Connecting accessories

- see page 5



ZGZP80-8 GY grey  
ZGZP80-8 BK black  
ZGZP80-8 RD red  
ZGZP80-8 BE blue



ZGZP80-2 GY grey  
ZGZP80-2 BK black  
ZGZP80-2 RD red  
ZGZP80-2 BE blue



ZGZP-2 GY grey  
ZGZP-2 BK black  
ZGZP-2 RD red  
ZGZP-2 BE blue

**Strips 8-poles ZGZP80-8:** unlimited possibilities of connection configurations (bridging of: A1, A2, A1 & A2 together), fast, safe and easy bridging of signals on the coil.

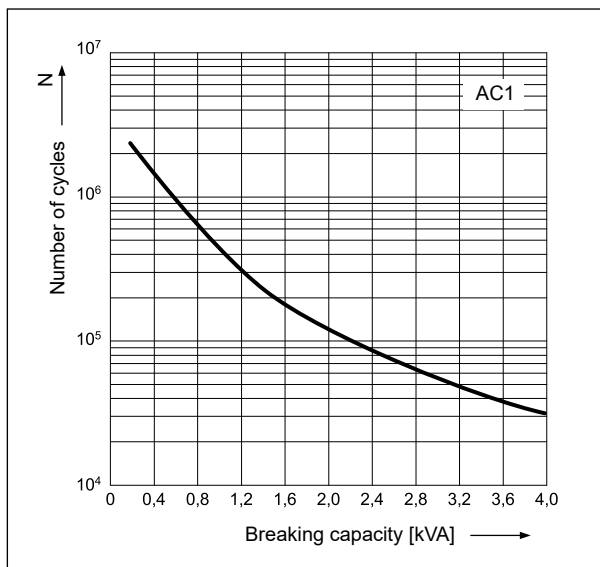
**Strips 2-poles ZGZP80-2:** free bridging of common input signals and terminals on the contact side, creating parallel connections of outputs in redundancy systems.

**Jumpers 2-poles ZGZP-2:** parallel connections of neighbouring poles in one socket GZP80 or GZP4 without use additional wiring, increasing the load capacity from 12 A to 16 A (PI85, PI85P).

# PI85P with socket Push-in GZP80 interface relays with Push-in terminals

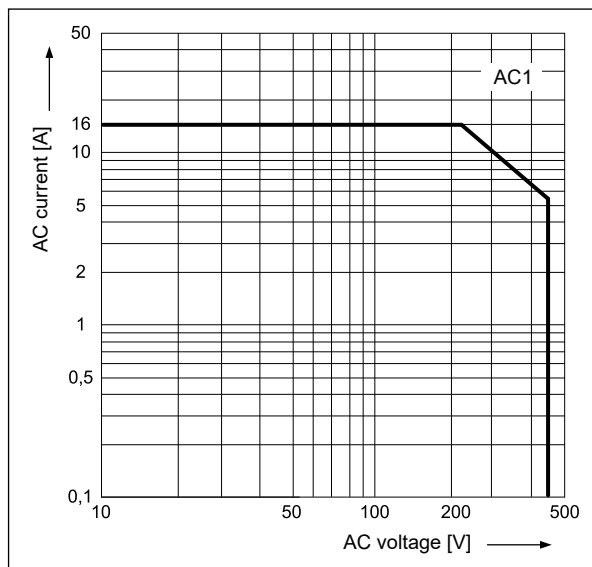
**Electrical life at AC resistive load.**  
Switching frequency: 360 cycles/hour

Fig. 1



**Max. AC 50 Hz resistive load breaking capacity**

Fig. 2



## Mounting

Relays **PI85P with socket GZP80** are designed for direct mounting on 35 mm rail mount acc. to EN 60715 or on panel mounting with one M3 screw. **Connections:** max. cross section of the cables: 2 x 1,5 mm<sup>2</sup> (ferrules without insulation), 2 x 1 mm<sup>2</sup> (ferrules with insulation), stripping length: 8...10 mm.

Plug-in sockets **GZP80** (flammability class V-0) may be linked with interconnection strips type **ZGZP...** Strip **ZGZP80-8** bridges common input signals, maximum permissible current is 10 A / 250 V AC, possibility of connection of 8 sockets. Strip **ZGZP80-2** bridges common input or output signals, possibility of connection of 2+ sockets. Jumper **ZGZP-2** bridges the neighboring poles of single socket **GZP80**. Colours of strips: **ZGZP...GY** grey, **ZGZP...BK** black, **ZGZP...RD** red, **ZGZP...BE** blue (see page 5).

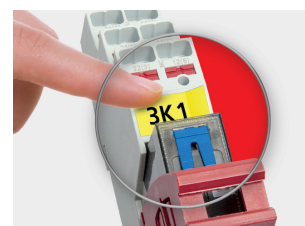
Description plates **MP15**, snap into tall marker groove, compatible with the standard for DIN rail terminal blocks, should be ordered separately.



**Terminals directed to wiring ducts:** esthetic cabling management, easier content reading from markers on wires.



**Holes for test probes:** ergonomic, stable position of the probe in the socket, freedom to perform measurements and control.



**Space for label:** for self-adhesive paper, foil or polyester tapes (max. width 9 mm).

# PI85P with socket Push-in GZP80 interface relays with Push-in terminals

**Coil data - DC voltage version**

Table 1

| Coil code    | Rated voltage<br>V DC | Coil resistance<br>at 23 °C<br>Ω | Acceptable<br>resistance | Coil operating range<br>V DC Ⓣ |                   |
|--------------|-----------------------|----------------------------------|--------------------------|--------------------------------|-------------------|
|              |                       |                                  |                          | min. (0...+70 °C)              | max. (0...+70 °C) |
| 012DC        | 12                    | 360                              | ± 10%                    | 8,4                            | 18,0              |
| <b>024DC</b> | <b>24</b>             | <b>1 440</b>                     | <b>± 10%</b>             | <b>16,8</b>                    | <b>36,0</b>       |
| 048DC        | 48                    | 5 760                            | ± 15%                    | 33,6                           | 72,0              |
| 110DC        | 110                   | 25 200                           | ± 15%                    | 77,0                           | 165,0             |

The data in bold type relate to the standard versions of the relays. Ⓣ The max. allowable voltage is coil overdrive voltage, it is the instantaneous max. voltage which the relay coil could endure in very short time. Relays with 48 V DC and 110 V DC coils shall be absolutely protected against any possibility of operation at voltages higher than the rated voltage.

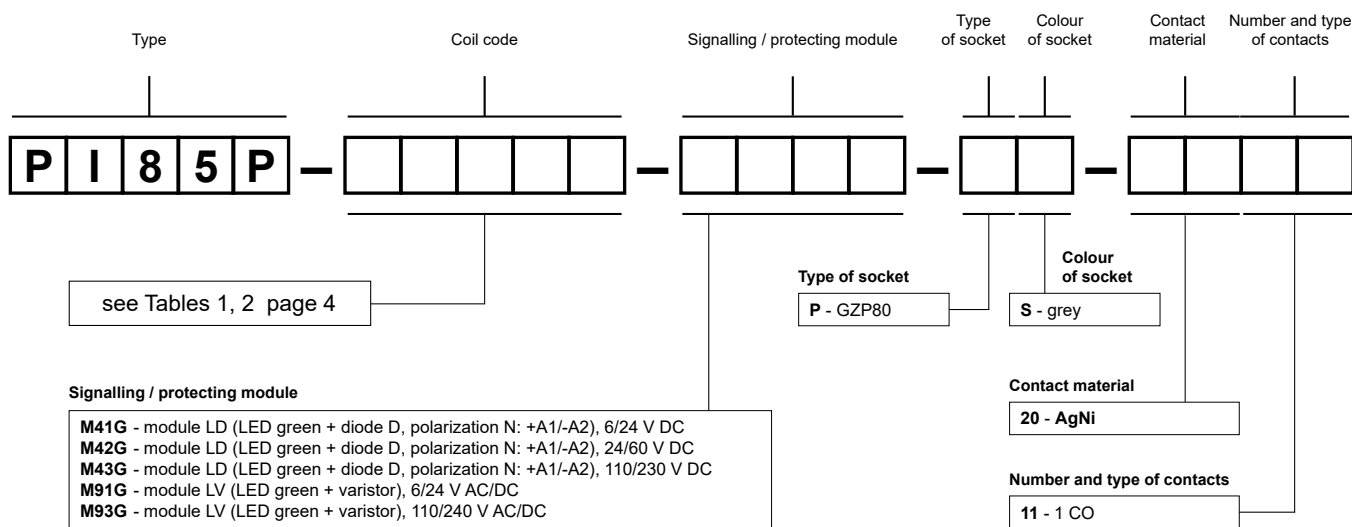
**Coil data - AC 50 Hz voltage version**

Table 2

| Coil code    | Rated voltage<br>V AC | Coil resistance<br>at 23 °C<br>Ω | Acceptable<br>resistance | Coil operating range<br>V AC 50 Hz |                   |
|--------------|-----------------------|----------------------------------|--------------------------|------------------------------------|-------------------|
|              |                       |                                  |                          | min. (0...+70 °C)                  | max. (0...+70 °C) |
| <b>024AC</b> | <b>24</b>             | <b>350</b>                       | <b>± 10%</b>             | <b>18,0</b>                        | <b>26,4</b>       |
| 115AC        | 115                   | 8 100                            | ± 15%                    | 86,3                               | 126,5             |
| <b>230AC</b> | <b>230</b>            | <b>32 500</b>                    | <b>± 15%</b>             | <b>172,5</b>                       | <b>253,0</b>      |

The data in bold type relate to the standard versions of the relays.

## Ordering codes



Examples of ordering codes:

**PI85P-024DC-M41G-PS-2011**

interface relay **PI85P** consists of: relay **RMP85** (one changeover contact, contact material AgNi, coil voltage 24 V DC), socket **GZP80** (grey, Push-in terminals), signalling / protecting module **M41G** (version LD), retainer / retractor clip **GZP80-0400** (red, plastic)

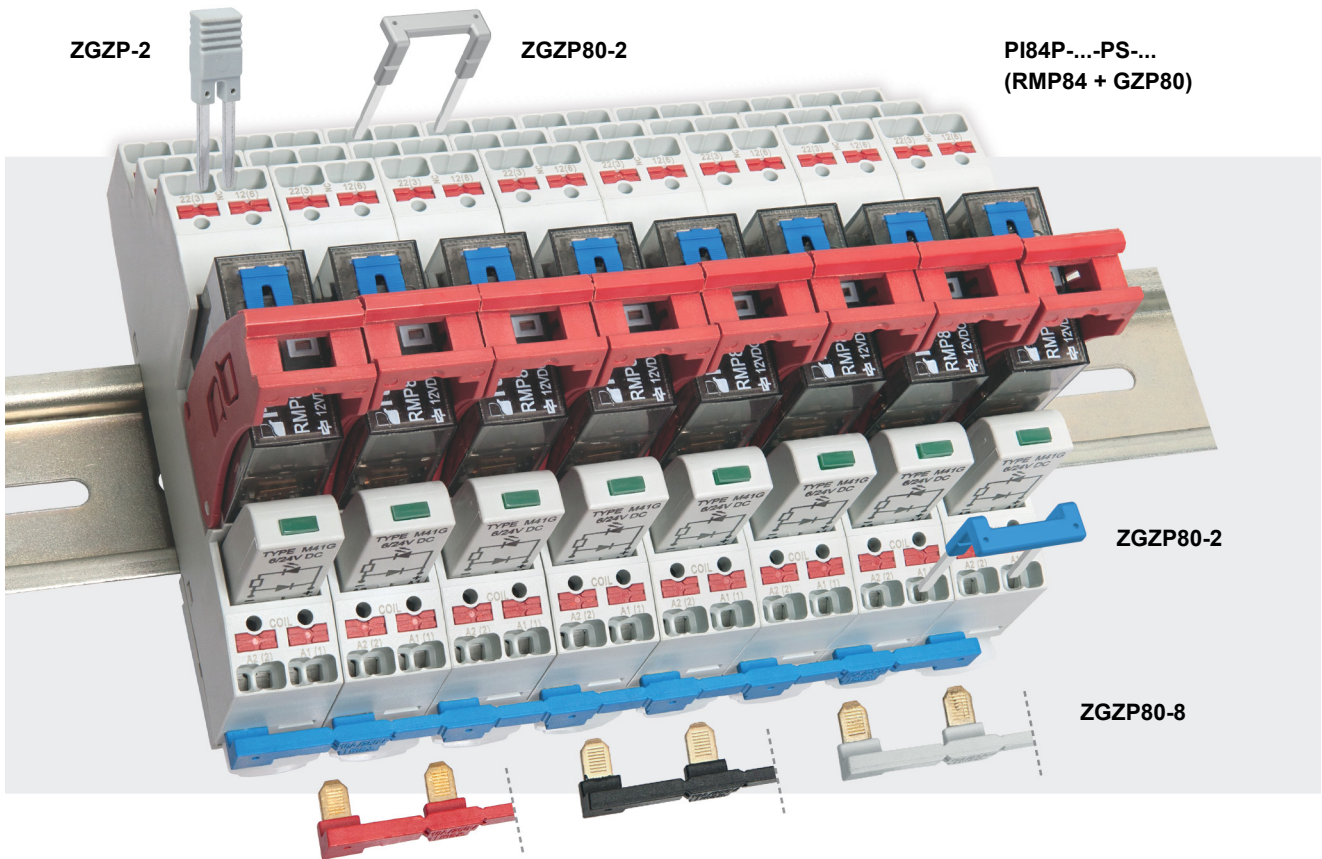
**PI85P-230AC-M93G-PS-2011**

interface relay **PI85P** consists of: relay **RMP85** (one changeover contact, contact material AgNi, coil voltage 230 V AC 50 Hz), socket **GZP80** (grey, Push-in terminals), signalling / protecting module **M93G** (version LV), retainer / retractor clip **GZP80-0400** (red, plastic)

### PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.

# Interconnection strips ZGZP... for sockets GZP80



## ZGZP... for:

| Plug-in sockets | Relays for plug-in sockets   | Interface relays ①   |
|-----------------|--|--|
| GZP80           | RM84, RM85, RM85 inrush, RM85 105 °C sensitive, RM87L ②, RM87P ②, RMP84, RMP85 | PI84-...-PS-... (RM84 + GZP80)<br>PI85-...-PS-... (RM85 + GZP80)<br>PI84P-...-PS-... (RMP84 + GZP80)<br>PI85P-...-PS-... (RMP85 + GZP80) |

① Interface relay **PI84** (**PI85**, **PI84P**, **PI85P**) is offered as a **set**: electromagnetic relay **RM84** (**RM85**, **RMP84**, **RMP85**) + plug-in socket **GZP80** + signalling / protecting module type **M...** + retainer / retractor clip **GZP80-0400**.  
② Also versions RM87. sensitive

## Interconnection strips ZGZP...

- designed for the co-operation with plug-in sockets of miniature relays and with interface relays PI84, PI85, PI84P, PI85P, which are equipped with Push-in terminals; sockets and relays are mounted on 35 mm rail mount acc. to EN 60715,
- strip **ZGZP80-8** bridges common input signals (coil terminals A1 or A2), maximum permissible current is 10 A / 250 V AC, possibility of connection of 8 sockets or relays,



- strip **ZGZP80-2** bridges common input signals (coil terminals A1 or A2) or output signals, possibility of connection of 2+n sockets or relays,



- jumper **ZGZP-2** bridges the neighboring poles of single socket **GZP80** (usage of jumpers ZGZP-2 in interface relays Push-in PI85, PI85P increases load capacity of socket from 12 A to 16 A).

